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ABSTRACT

This report reviews a practicum designed to study and address problems of the physical play environment of a preschool which served children of 2 to 5 years. The goals of the practicum were to: (1) increase the amount of time children spent in physical play activities; (2) enhance the play environment by the addition of at least 10 pieces of equipment; and (3) use the school resources to improve school programs in play development. The school's financial resources were used to add equipment to the play environment. Inservice sessions for the director and teachers were planned. The sessions placed a renewed emphasis on learning through play and helped teachers meet their objectives through physical play activities. Each of the goals of the practicum was achieved. The children increased the amount of time spent in play activities each day and the preschool purchased 10 pieces of multi-functional play equipment. Questionnaires completed by parents revealed that the majority of parents felt that students' needs were being met through the increased emphasis on play activities. Respondents agreed that the preschool's programs had been enhanced by the development of an outdoor play environment. (Author/RJC)

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Increasing the Learning Experiences of Preschool Students Through the Development of a Physical Play Environment

by

Rosemary F. Erimie

Cluster XXIV

A Practicum II Report Presented to the Ed.D. Program
In Early and Middle Childhood
In Partial Fulfillment of the Requirements
for the Degree of Doctor of Education

NOVA UNIVERSITY

1989

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Date of Final Approval of Report

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ABSTRACT

Increasing the Learning Experiences of Preschool Students Through the Development of a Physical Play Environment. Erimie. Rosemary F., 1989: Practicum Report. Nova University Ed.D. Program in Early and Middle Childhood. Descriptors: Preschool / Day Care / Early Childhood Education / Playgrounds / Play Equipment / Motor Skill Development / Learning through Play

This practicum addressed the problem of the lack of a physical play environment in a preschool serving two to five year old children. The philosophy of the school was that all children could learn and achieve once they had found their learning modality. The students were exposed to as many ways of learning and to as many experiences as possible. They were encouraged to take part in activities they enjoyed and to grow and develop at their own rate. The school lacked the component of gross motor and physical development activities in the curriculum. A review of the literature emphasized the importance of these types of activities for preschool students.

The goals of the practicum were: (1) to increase the amount of time spent in physical play activities each day; (2) to enhance the play environment by the addition of at least ten pieces of equipment; and (3) to utilize the resources of the school to improve the programs of the school in the area of play development. In meeting these goals, the financial resources of the school were used to add equipment to the play environment. The writer planned inservice sessions for the director and teachers. The purpose of the sessions was to place a renewed emphasis on learning through play and to assist the teachers in meeting their objectives through physical play activities.

The objectives of the practicum were met. The results indicated that a developmental curriculum designed to meet the needs of preschool students will be successful.

CHAPTER I

INTRODUCTION

Description of Community

The setting in which the practicum took place is a pre-school/day care center located in an urban business and residential area. This particular community is often referred to as the next hot area for young professionals, and major renovations of houses, buildings, and businesses are currently taking place.

Recent population growth and real estate development can be traced to several factors. These include the availability of federal community development monies, large tracts of undeveloped land and properties for sale, and accessible public and private transportation routes both to downtown and to local businesses, schools, churches, etc. The geographic boundaries of the community consist of urban settings on three sides and a lakefront with parks, beaches, docks, and boating and fishing areas on the fourth side.

There are varied levels of housing in the area. These include low income federally subsidized housing, middle class single family homes and apartments, and luxury high rise apartment buildings, condominiums, co-ops, and townhouses. The parents of the school are

from diverse socio-economic levels, educational and racial backgrounds, and the families consist of both one parent and two parent families. The majority are professional working people. A small percentage of Title XX students are accepted yearly. The parents of those students are from low economic and educational backgrounds.

The pre-school building has a total area of 2400 square feet and the center is set up in an open classroom style with each area sectioned off by dividers. The dividers are also used as bulletin boards and many have shelves for storage. Rows of milk crates line the walls and are used as storage lockers for the children. Each locker has a hook underneath for coats.

Classroom furniture consists of tables, chairs, toy storage areas, bookshelves, and file cabinets. Each classroom has a carpeted area for reading, singing, and play activities. The center has a full kitchen, washroom facilities, a utility closet, and three separate loft rooms which are currently used for an office, storage, and supply areas.

The outdoor playground area is 2000 square feet, enclosed with a chain link fence, and is located directly in the rear of the center. The playground has a 300 square foot cement area for tricycles, hopscoth,

four square, and concentration games. A sand box, water table, and low to the ground equipment are included. The ground is covered with pea gravel for safety.

The center has experienced rapid growth during its' five years of operation. The student population has increased from twelve students in 1984 to seventy students in 1988. The center is licensed by both the city and the state for a maximum capacity of seventy students. The racial/ethnic composition of the students is composed of twenty-four caucasian, seventeen black, nine hispanic, twelve oriental, four indian, and four "other" students at the present time. The male/female ratio is currently thirty-eight/thirty-two.

The staff consists of one director, eight teachers, and a cook. The staff has the same middle class background. All the teachers have worked to support themselves through college. All of the staff members, with the exception of one teacher, have grown up in an urban area. At the present time, four teachers are hispanic and the rest are caucasion.

The socio-economic make-up of the school varies. The community itself changes from block to block. The students come from all types of neighborhoods ranging from those in which houses sell for $300,000 and up to those who live in government supported housing projects.

The occupations of the parents range from professionals to highly skilled technical workers, blue collar workers and welfare recipients.

The center was founded as a start-up venture as opposed to an established business and is a private, for-profit corporation. School policies, standards, curriculum, and programs are set by the business partners and an educational consultant.

The philosophy of the center is that of a commitment to a curriculum that will provide each child with the necessary stimulation to assist the development of his or her intellectual, physical, social, and emotional growth. The center promotes the view that pre-school programs have a positive and immediate influence on children's emotional and psychological development as well as on their intellectual, physical and social growth and that children who attend pre-school are more prepared in all areas to succeed in elementary school than children who do not attend pre-school.

Author's Work Setting and Role

The writer is an owner and the executive director of the school. The writer's educational background includes a Bachelor's degree in sociology and education and a Master's degree in political science and public administration. The writer holds teaching certification from both the city and the state and is also certified as a physical instructor. The writer has received numerous awards including teaching recognition from the Board of Education and the President's Council on Physical Fitness.

The responsibilities of the writer include but are not limited to staffing, payrolls, insurance, employee evaluations, purchasing, curriculum, and programming. The writer must also be aware of changes in legislation and regulations affecting the pre-school industry.

CHAPTER II

STUDY OF THE PROBLEM

Problem Description

The school was committed to providing a stimulating environment in which the intellectual, physical, social, and emotional development of the students would be enhanced. The writer felt that the curriculum was well designed to meet the needs of the students but that the programs of the school would have been complemented by an emphasis on learning through gross motor play activities and the provision of learning experiences through physical play. She felt that the academic and social skills of the students would be enhanced and that their overall experiences would be more meaningful to them.

The philosophy of the school was that all children could learn and achieve once they had found their learning modality. The writer and the staff believed that the students should be exposed to as many ways of learning and to as many experiences as possible. The children were not pushed to excel but were encouraged to take part in the activities they enjoyed and to grow and develop at their own rate. They were not expected to do well in every activity, but they learned from the varied

experiences that were offered to them in the course of the day. Each child was able to look forward to one of his favorite activities throughout the day. For example, some children loved the playroom. They took over at the kitchen corner and cooked, ironed, washed dishes, etc. happily, while others preferred to sit at the table and observe. Some of these observers, however, sometimes came alive during music time. Very quiet children often expressed themselves through painting or drawing. In keeping with this philosophy, the teachers planned a variety of activities each day. The readiness programs used were activity based hands on programs in which the students learned by doing.

In addition to learning through play with toys, puzzles, books, etc. the writer believed that the students should have ample opportunity to learn through physical play. Their gross motor and movement skills as well as their fine motor skills should be developed. The things they would learn about themselves, their peers, and their environment while playing would correlate with all other aspects of their development.

The majority of the students had been enrolled in the preschool because their parents were working. Most of the children spent eight to ten hours each day in school. For children this young, their entire day was

effectively spent in the school. The staff and the administration of the school strove to improve the programs of the school and to provide better services to the children and the parents. The area of physical play activities was one area that could be improved upon in terms of providing the best environment for the childrens' development.

Briefly stated then, the problem was that gross motor and physical development activities were not as available to the students as they could have been in the course of the preschool day. The school lacked this component of learning in the curriculum.

Problem Documentation

The writer developed a checklist of activities that were designed to aid in gross motor skill and movement development (see Appendix A). She indicated which activities were available to the students (see Appendix B). Another checklist documented the amount of time spent on such activities by the students of the school (see Appendix C). A checklist of equipment available was found in Appendix D. The final documenation was in the form of a survey distributed to the parents of the school (see Appendix E). The results of the parent survey were found in Appendix F.

Causative Analysis

The writer saw three causes of the problem. One was the lack of importance attached to physical activities as opposed to more academic types of activities. Another was the lack of an environment designed to encourage physical or movement types of activities. A third cause was that resources often were not put into this area of the building or the curriculum.

The Related Literature

Early childhood programs have been governed in the past by a philosophy which advocated that children should have opportunities to create and explore in a nurturing and supportive environment which did not include specific measurable objectives. This way of thinking was likely to be at odds with the current curricular reforms that advocate substituting vigorous activity for sedentary play and the learning and assessment of specific gross motor skills rather than general developmental play (Seefeldt, 1984). Most preschool curricula emphasized fine motor, social, and cognitive skills, and neglected gross motor skills in the process. Incidental large motor development that

took place was often a consequence of play and not the result of activity planning. Preschool students generally did not have access to a defined program of gross motor skills, where the progressions of patterns that led to physical proficiency were taught in a systematic manner. The early years of life are critical in terms of developing motor skills. To learn to move and to develop the skills necessary for later games and sports is a primary task for preschool children. There will be no other time in their lives when they will have the opportunities to practice gross motor skills and they will never again be as motivated to do so as when they are in their preschool years.

Many early childhood professionals lament the fact that motor skill development is often neglected. The importance of physical activity and motor skills was stressed over and over in the literature. Strother (1987) wrote of the fact that most child care centers and preschool programs are based on a Piagetian model. Educators and parents were concerned with the current emphasis on formal academic instruction for young children. Elkind (1986) warned that formal learning programs which exclude play experiences could actually damage the child in terms of personality and future learning. Such programs may risk the child's

motivation, intellectual growth, and self-esteem in spite of the intentions of the program.

According to Piaget, a child's thinking develops in a sequence of stages. He believed that the order at which the stages appear is consistent for all children, but the ages at which the stages evolve depend in part upon the quality of the physical and social environment in which the child is reared. Teachers with concrete-operational children must remember that they can reason only about things that they have experienced directly. The Piagetian theory says that learning through activity and direct experience is essential for pre-operational and concrete-operational children. It follows then, according to Ramirez (1983), that young children must be provided with opportunities for such experiences. The types of materials and activities that children need to grow and to continue their development must be available to them.

Basic understandings of early childhood development are that children learn through play and that play has inherent value in terms of learning and development (Johnson, Ershler, & Bell, 1980). However, the amount and type of play activity is less well understood. The issue has evolved into an instruction versus enrichment controversy. The authors found value in free play time

in that it gives teachers a way of diagnosing a child's interests so as to more effectively provide suitable materials. Children learn about their social and physical environment through observation and action. Their physical experiences are the prerequisite for the development of later cognitive abilities.

Hertz (1986) wrote of parents who opposed a developmental kindergarten program even though the program was designed to address the needs of the children. Many adults do not always equate developmental play activities with cognitive or academic knowledge and growth.

Very young children have a natural curiosity about their world. It is the responsibility of the adults involved with the child to arrange the environment so that it serves as stimulation (Hasson 1984). Toys and equipment can enhance curiosity, creativity, and the emergence of skills and abilities. It is important for teachers and parents to observe the types of activities children engage in during play time and to provide opportunities for success in both extension activities and new skills.

Riggs (1980) defined movement as the essence of living for young children. Movement education addressed children's capacity to learn through movement.

Preschool children were developmentally involved in practicing fundamental skills such as running, jumping, catching and throwing. They needed to touch, to manipulate, and to discover their physical capabilities and limitations. Children moved in order to discover. Movement should be central to understanding preschool children and the activities in which they should engage. During the preschool years children discovered what they could do, how fast they could run, in how many ways they could move, how to change the size of their movements, etc.

Pangrazi, Chomokos, and Massoney (1981) wrote that the preschool years are critical for motor skill learning and that physical education programs must be planned and designed to encourage the development of motor control. Since children differed in interests and competencies, a wide variety of activities must be offered. A comprehensive program will include different types and levels of activities which are necessary to meet the range of interests and abilities of preschool children.

The authors also wrote of variations in physical development which can be determined by skeletal age rather than chronological age. The physical maturity of same age students varies widely and this variation

affects performance in motor activities. A broad program of various physical activities assures that each child can progress with maximum opportunity for success. In addition, a broad program incorporating many diverse activities has the potential to interest and further motivate the children.

Stewart (1982) asked the question of what should be expected of two year olds in a day care setting. Teachers should be familiar with activities that two-year olds should be encouraged to do in school. She felt that a large portion of the day should be used for gross motor skill development, both indoors and outdoors. Because of Piaget's interest in how children acquire knowledge, we understand that young children learn through concrete experiences and that very young children best understand experiences in relation to themselves. Therefore, much of the learning of preschool children occurs through physical activity in direct interaction with their surroundings. An emphasis on large muscle development requires blocks of time for supervised free play. Equipment that will encourage children to climb, walk, ride, jump, push, slide, etc., should be provided.

Soderman (1984) spoke of formal education for four year olds. Many parents of preschool children worried

that their children were already educationally disadvantaged at the time of kindergarten entrance. She felt, however, that formal education for preschoolers should occur only if it would enhance the cognitive, physical, social, and emotional development of the children. The curriculum must be matched appropriately with the developmental needs of the children.

Soderman felt that the cognitive sifting down of academics and the demands to achieve that were placed on kindergarten children were greater than their developmental capacity to respond. Kindergarten programs have moved away from play activities and socialization toward identifiable goals and objectives. Children, however, have not changed. They function with a pre-operational mind and an ego-centric nature. They absolutely need to play. The quality and quantity of their play time are later seen in their creative thought, their ability to make decisions, and their potential for coping with situations.

Internal motivation and control are basic elements of creative thought in young children (Yawkey & Hrncir, 1982). To guide creative thought, opportunities for exploration, repetition, replication, and transformation must be provided. Children must be allowed to think creatively in their imaginary and real actions.

Motivation increases as children follow their own interests. Inner-directedness increases creative thought while outer-directedness decreases imagination and play activities.

Thomas and Gallagher (1981) concurred and wrote that the outcome of games or sports is not, and should not, be the most important consideration in children's activities. The effort and ability of the child are key factors in physical development. As adults, our job is to focus the child's perception on trying to do his best and on doing better than he had done previously. It is important that this is seen as an internal factor for the child. He should feel that he is in control. Sports such as swimming focus on individual past performance. Even preschool children enrolled in swim classes, for example, go under water, blow bubbles, use the kickboard the cross the pool, etc. at their own pace. They try to better their own performance, not to meet preset goals or objectives. This intrinsic motivation should be encouraged in all areas of physical activity.

Almy (1984) wrote that children's play is often thought of by adults as a time filler rather than a necessity of healthy development. Play is a special activity that is set aside from other behaviors in

several ways. When children play, their interest is self-directed. They are intrinsically motivated to solve problems. They are not concerned with meeting goals as much as with the ways in which a goal may be achieved. They experiment with possibilities and become more flexible in their thinking and problem solving skills. Play behavior is not literal. Much of what children do stands for something else. They are actively engaged in their "work", or learning, when they are playing. It is important for adults to recognize that play is as essential to the child as proper nutrition and rest. Ample time, space, materials, and equipment for play are important. The role of the adult, then, is to provide the environment and opportunity for children and to respond to and support their play ideas.

A child's early years are devoted largely to acquiring fundamental motor patterns and manipulative skills (Riggs, 1980). These skills provide the foundation for the later skills needed for schoool, sports, and play. It is crucial to the child's development that the foundation skills be laid in the early years, which are critical for the practice of emerging physical skills. Physical activity has both a direct and indirect effect on physical growth and motor

development. The nourishment of cells for bone growth depends on their blood supply. Physical activity which increases cardiovascular circulation stimulates growth. The functioning of all vital organs is facilitated by regular physical activity.

Other motor developments include increased body awareness, spatial awareness, and a greater conception of direction and laterality, or internal awareness of the left and right sides of the body. With this awareness, kinesthetic information about the body in space can be matched with visual information about objects in the environment. A sense of directionality allows the child to come into contact with and to manipulate objects. This is evidenced in activities such as catching, kicking, striking, or reaching.

Body image is an awareness of the body in relation to other objects. Riggs (1980) felt that it is important for children to understand what it means to control the body both on and off various pieces of equipment or apparatus. One of the objectives of movement education is control when jumping, landing, balancing, sliding, etc. Another skill to be acquired concerns the control of balls, hoops, ropes, and other manipulative equipment.

Riggs also found that self-confidence in children

has it's roots in motor behavior and physical activity. The development of self-confidence in preschool children is significantly influenced by the way parents and teachers and the child's environment support autonomy in motor activity. To be competent at the preschool age means to be developmentally effective, to be able to run, jump, swing, climb, etc., and to be able to make judgements about what activities can be engaged in with safety and success. This feeling of competence is derived from interaction with the physical environment.

Young (1980) spoke of children gaining control over the environment through relationships between themselves and objects. Manuevering their bodies along, over, under, through, and around objects helps children learn distance, size, and relationships. Large equipment is exciting and challenging to young children. Equipment must be sufficiently complex to promote a variety of body management activities. Learning experiences with apparatus should include weight bearing, weight transfer, body action, and body shape activities.

Weight bearing activities include those which support weight on or by various body parts or by combinations of body parts. Getting on and off the equipment safely in a number of ways is also a consideration. Weight transfer activities concentrate

on the transfer of weight from one body part to another. Rolling in different directions, rolling with different body shapes, and body rocking are included here. Body action activities include stretching, curling, twisting, and moving on, over, under, around, and along the equipment. Body shape activities refer to balance activities while making twisted, curled, stretched, flat, or long shapes.

The needs and characteristics of preschool children are distinct (Fowler, 1980). They seldom need motivation and have not yet established incorrect actions of movement. They do not sit still for any extended period of time. They wiggle, shift, stretch, squirm, and sprawl. Physical movement activities for children can be enhanced through the acceptance of the value of children's spontaneous movement, through the development of a sense of competence in the skills of stability, locomotion and manipulation, through the expansion of the psycomotor repertoire through meaningful physical activity, and by challenging the child to active manipulation of his body on large appartatus.

Iverson (1982) lamented the fact that play activities were not encouraged for children today. Teachers often admonished their charges to be neat,

quiet, good listeners, etc. Iverson felt that this lack of active play was unproductive. Active play was an effective way to increase the amount of time children spend engaged in an activity and provided motivation to the child while reducing frustration.

Glickman (1982) looked at evidence suggesting that children's cognitive development is based on earlier play experiences. He contended that achievement scores have declined over the last generation because children have less time and fewer opportunities to play. One cause of this is that America is no longer a rural nation. Large spaces for running, tumbling, climbing, etc. are not available. Apartments, townhouses, and condominiums generally have little open play space. Today's children often have only streets and sidewalks for play. Schools should be trying to fill this void. The child who does not play out of school and who seldom has the opportunity for physical play in school does not have a readiness base for the mastery of reading and math skills. Encouraging children to run, jump, climb, etc. takes on added significance when we as adults are aware of the crowded conditions in which many children live and play. Unfortunately, programs that have any potential for play are the first to be eliminated in the quest for higher scores. Time and opportunity for play

must be provided if students are gointg to reverse the trend in declining test scores.

Katz (1984) spoke of social skills learned through physical play activities. These included turn taking, where a child might be encouraged to do something else while waiting for a piece of equipment or waiting in line for his own turn. A second skill was that of negotiation, or bargain striking. Children can be encouraged to guess what will appeal to another child and to make a deal in which the needs or wants of the other child are considered. The third area was that of coping. Children learn to cope with having their requests, pleas, and/or demands turned down during play time.

Verbal skills in which children learn to express their feelings and wishes clearly and effectively were also learned and refined in play situations. These activities were enhanced through the right kind and quantity of equipment for the ages, background, and cultural differences of the children served.

Trostle and Yawkey (1982) advocated that creativity to play be considered the fourth "r" in education. A child's physical use of objects in play are self-generated and internal. Physical play activities are significant in encouraging creativity, imagination,

and intellectual growth in children.

Head Start programs for three and four year olds require the promotion of physical growth as part of the curriculum (Love, 1984). Equipment designed to develop large muscles, such as wheel toys, climbing apparatus, and blocks, are provided. It has been determined that a comprehensive preschool program will include all areas of health, safety, physical growth and motor development.

Many programs for preschool children are faced with financial and spatial constraints (Cleave, 1982). Facilities are often able to provide a good range of indoor activities but often lack outdoor play space and equipment. Children in various types of preschool education usually have similiar experiences in activities involving fine motor, perceptual, artistic, tactile, imaginative, amd representational skills. They differ in gross motor activities, which are limited in many preschool situations. Equipment oriented activities often occupy a small proportion of the day. Gross motor activities are limited to set periods of time. Increased amounts of time are given to activities having to do with literacy and numeracy.

Since the development of young children is so dependent upon play activities, it is important for

educators to understand the environmental factors which influence various aspects of play in the preschool classroom (Hart & Sheehan, 1986). The outdoor play environment is an important extension of indoor classroom learning. Outdoor play provides opportunities to enhance child growth and development in ways that are not provided by the indoor environment. Types of development that have been observed in the outdoor play time include cognitive, social, verbal, perceptual motor, fine motor, gross motor, locomotion, and body image.

In conclusion, a review of the literature showed that, while the development of gross motor skills and learning through play were considered important elements of preschool education, these aspects of the preschool day were often eliminated from the curriculum. The long term result would be that children would be lacking in cognitive skills and they would not be as motivated to learn as they might have been. It was important that child care professionals put into practice these sound developmental principles of child development.

CHAPTER III

ANTICIPATED OUTCOMES AND EVALUATION INSTRUMENTS

Statement of General Goals

The administration and faculty of the preschool believed that the students should be encouraged to reach their full potential in all areas of development. The students left the school at the end of the kindergarten year and entered the public school system at the first grade level. The preschool strove to ensure that each child was ready to enter elementary school and was able to keep pace with the first grade curriculum.

The goals of this practicum were to enhance and complement the programs of the preschool. This was done through the development of a play environment and an emphasis on learning through play.

Behavioral Expectations

A review of the literature indicated that, although the importance of developmental play activities was generally recognized by early childhood professionals, resources were not always devoted to this area of learning. Schools and administrators did not allocate the money necessary to provide an appropriate environment and teachers and parents often preferred

more academic types of activities. The behavioral objectives chosen were designed to alleviate these areas of concern and are stated below.

1. Over a period of eight months, the teachers of the preschool will devote 10% more time each day to physical play activities. This will be measured by a play activities checklist.

2. Over a period of eight months, the play environment will be enhanced by the addition of at least ten pieces of appropriate equipment which will encourage the development of the students through play activities. This will be measured by an equipment checklist.

3. Over a period of eight months, the resources of the school will be utilized to enhance the programs of the school in the area of play development. The success of this objective will be determined by a parent survey in which 80% of the respondents will indicate that the needs of the students are met through developmental play activities.

Evaluation Instruments

The first objective, the devotion of 10% more time for physical play activities, was measured by a play activities checklist. The writer would have liked to use more time of each day for motor skill development

and asked each teacher to estimate how much time was spent in motor activities. Most of the children were in school from nine to ten hours every day. The teachers worked an eight hour shift and were with their classes for the entire eight hours. Lunch and snack time occuppied approximately one hour each day and nap time was scheduled for two hours every afternoon. The activities checklist was therefore based upon a five hour day. The teacher inservice portion of the solution strategy focused upon achieving learning objectives through play. The writer expected that the teachers would then begin planning gross motor activities into their daily curriculums on a more consistent basis. At the end of the implementation period, the teachers would again estimate the amount of time spent on motor development on a daily basis. An analysis of the pre and post implementation checklists and times would indicate a 10% increase in the amount of time spent on gross motor skill development activities.

The second objective, the enhancement of the play environment, was measured by an equipment checklist. The writer compiled a list of equipment and apparatus that would aid in the development of the children through gross motor skill activities. A checklist at the end of the implementation period would indicate that

the play equipment available had increased by at least ten pieces of apparatus. This additional equipment would also assist the teachers in planning activities to meet Objective 1.

The third objective, the utilization of the resources of the preschool to enhance the play development program, measured a comparison of pre and post implementation parent surveys. The parents were kept abreast of the programs and activities in the classrooms through conferences, student work, special programs, and newsletters. The writer anticipated that 80% of the parents would indicate that the resources of the school, including money, time, space, and materials, had been successful in adding a physical activities component to the programs of the school.

Measurement of Objectives

The writer compiled a list of physical play activities that were beneficial in terms of aiding in the development of preschool children. The teachers indicated how much time their classes spent in these types of activities on a daily basis. At the end of the implementation period, the teachers will indicate the amount of time spent on the same activities.

The writer also compiled a list of appropriate play

equipment and apparatus designed to enhance the physical and motor skill development of preschool children. Equipment available to the children of the preschool was checked and will be compared with the same checklist at the end of the implementation period.

A parent survey will determine whether the developmental needs of the students are being met through the physical activity programs of the preschool. At the end of the implementation period, 80% of the parents surveyed will indicate that the physical and motor skill development program is successful.

CHAPTER IV

SOLUTION STRATEGY

Discussion and Evaluation of Possible Solutions

Fennel (1984) conducted a study and found that physical activity involving action on objects, social interaction, and verbal communication had a positive effect on kindergarten childrens' Metropolitan Readiness Test scores. The children worked together using large building toys every day for four weeks. The results showed that the children who were engaged in physical activity and social interaction were more adept in the symbolic tasks encountered on the test than those who were not. She concluded that a relationship existed between success in physical problem solving activities and symbolic problem solving competence. The knowledge gained through action, thought, and language may be the basis for academic skill and higher order conceptualization.

Van Oteghen and Jacobson (1982) concluded that planned movement experiences would enhance the growth of a child in such a way that he experiences success appropriate to his developmental level and interests. They found that children who understand how and why the body moves in certain ways were more successful and more

inclined to move the body in a variety of ways than the child who was not stimulated toward such discoveries. Learning took place when a child interacted with materials, ideas, and objects within the immediate environment. The authors felt that the accomplishment of movement tasks contributed to cognitive development. They were successful in planning experiences to ensure exposure to a variety of movement tasks and activities based upon developmental and individual needs and interests. These experiences were found to lead to attainable learning objectives.

Research has demonstrated that play is of great value to young children (Frost & Wortham, 1988). Play activities gradually and naturally lead into work. The developmental values of play are many and are enhanced through an appropriate environment and equipment. The authors have found that developmentally appropriate playgrounds can greatly aid in all areas of child growth and development. Some of the characteristics of these playgrounds are: preservation of natural features, children involved in planning, developmental needs of children considered, and curriculum needs considered.

Fuller (1986) also found that the challenge of improving school quality is to identify the aspects of schooling which are linked to school achievement or

behavior. Trostle and Yawkey (1983) agreed with the conclusion that providing a child with play objects and equipment would enhance the child's creativity and growth.

Adaptation of the environment has been found to encourage imagination, social skills, cognitive functioning, and an understanding of the external world. It is important for a supportive and varied environment to be provided and for the child to be given time to grow in such an environment.

Riggs (1980) wrote that children develop cognitive skills through psycho-motor skills. They explore, discover, select, and repeat while they practice and refine locomotion and manipulation skills. Curiosity and discovery in children lead to further learning. Both intellectual and motor development occur when each discovery is more intrinsically satisfying than the last. Problem solving and decision making skills are also enhanced through physical activities. For example, when confronted with the task of going under a piece of apparatus, children decided whether to go head first or feet first, on their backs, or their stomachs, whether they will slide, crawl, or wiggle. Learning to make these types of judgements of size, space, and distance developed critical thinking skills and came about

through physical activities and programs.

The results achieved by others illustrated that knowledge of how children learn and a child centered environment were beneficial to the overall development of children. The writer agreed that planned physical play time and an appropriate environment encouraged children to play and to learn in the process.

Morris, Atwater, Williams, and Wilmore (1981) determined a need for standardized tests or quantitative norms for motor skill performance in preschool children. They felt that the range of performance of children in this age group and the lack of appropriate tests and norms made it difficult to determine whether a child was above or below average in terms of motor skill development. It was therefore difficult to design and implement programs and learning experiences to provide optimal skill development. The authors developed a Preschool Test Battery to evaluate the motor skill development and physical growth of preschool children. The skills tested were balance, scramble, catching, speed run, long jump, tennis ball throw, and softball throw. The authors felt that the test results were reliable and they were therefore able to plan appropriate guidelines for motor skill development.

The writer felt that to test preschool children in

physical skills and to set certain standards of achievement in this area may cause children to be viewed as developmental failures at an early age. She preferred the approach of Seefeldt (1981) who found success in the creation of an environment in which all children were given the opportunity to develop motor skills at their own rate. Important variables in the development of motor skills included body size, skill level, experience, and biological maturation. The objectives of such programs for children should be to teach them the fundamental motor skills in a socially constructive environment rather than a competitive or goal oriented structure.

Fowler (1980) wrote of three ways in which teachers could successfully play a role in discovery learning. First of all, the environment could be structured in such a way as to help children learn the things they should know. This could be accomplished by providing specifically designed equipment and play apparatus. Play apparatus which provides opportunities for climbing, swinging, hanging, jumping, sliding, and balancing is inviting to young children. Teachers can help individual children develop their ideas, skills, and movement patterns as children make use of tasks they are ready for developmentally. Second, teachers can ask

questions directed toward specific learning. Third, teachers can reinforce behaviors which indicate that learning has taken place.

Fowler also wrote of the importance of organizing time for movement experiences. The amount of time scheduled for certain activities will vary if there is enough variety and challenge to keep the children involved. Thirty minutes or more can be scheduled in a less structured but challenging environment. Safety considerations were another aspect of physical play that must be taken into account. Preschool children fall more than any other age group of children because they are still learning how to balance. The preschool years are important for developing safe ways of moving. It is the teacher's job to minimize risks through careful planning of both the environment and of the learning activities of the students. Suggestions include monitoring of play apparatus, making sure the children are wearing safe clothing, helping children find their own way on and off of equipment, and providing options so that the child can attempt things he feels comfortable doing.

Halloway and Reichart-Erickson (1987) looked at the relationship of day care quality and free play activities of four year old children in relation to

social problem solving. Quality indicators included interaction with teachers, arrangement of physical space, the spaciousness of the environment, the appropriateness and variety of materials, the quality of the outdoor area, the group size, and the child-teacher ratio.

The goal of the authors was to examine aspects of the day care environment that affected children's behavior during their free play time. The arrangement and the characteristics of the physical environment were important sources of influence on children's behavior in a day care setting. The amount of space available and the arrangement of that space, the equipment and activities available, and the provision for privacy for solitary or small group activity were also factors. Children's interaction with peers was enhanced when there was enough space to play without interfering with others. The writers found that children in centers with spacious areas for play spent more time engaged and less time observing. Where age appropriate materials and equipment were available, children were found to be more engaged and prosocial. Children who spent time in crowded facilities or in centers with inadequate outdoor space and equipment were found to spend less time playing and more time observing.

There have been many changes in the structure of families and home environment (Zimiles, 1986). These changes have affected the patterns of development and the nature of developmental needs of children. Children are growing up in smaller families and have fewer opptorunities to play with other children. Preschool programs have become a vehicle for providing access to friends and playmates. In addition to smaller families, it is not always safe, especially in urban neighborhoods, for children to play outdoors. Preschool programs have been successful in filling this void by providing supervised, protected, and appropriate play areas.

Frost (1986) felt that the challenge to adults in the physical development of children was to ensure that children have access to safe, challenging playgrounds and that time and support for their use is assured. Certain factors should be considered for the creation of successful play environments. These included the total design of the environment, the design of the equipment, the installation of the equipment, the maintenance of the equipment, and the use and supervision of the equipment.

Ford (1983) wrote of physical, mental, and behavioral activities that parents can enjoy with their

preschool children. She suggested that children can be given a good start in the development of abilities and ideas that are fundamental to future learning through various activities. Important motor skills include running and galloping, marching, dancing, riding a tricycle, kicking, throwing, catching, jumping, climbing, and crawling. Recommended apparatus are swings, sand box, rope climb, punching bag, and tent or tunnel.

Ideal play spaces provide opportunities for total child development (Werner, 1980). The provision of a wide variety of activities ensures optimal development for the children. This includes adequate unobstructed space which will permit running, chasing, and fleeing. Equipment designed to help children build their upper body strength, speed, balance, co-ordination, locomotion, stability, and manipulative skills will bring about results. This type of equipment includes climbing apparatus such as tires and ropes, poles, slides, and hoops. Balls, balloons, inner tubes, hopscotch, sand boxes, and so forth are also effective in optimizing motor skill development.

The writer agreed with these authors and planned to incorporate their suggestions into the solution strategy. An emphasis on the the skills listed above

would bring about success in meeting the goals of the school. The provision of an appropriate environment and equipment would be a factor in the success of a motor develpment program.

Description and Justification for Solution Selected

The solution to the problem of a lack of a physical activities component of the preschool curriculum was based on effective strategies designed to provide an appropriate environment and equipment. The writer determined the specific physical activities that would complement the students' growth and development. As the school served two through five year old children, the writer looked at activities for all preschool age groups. This approach also enabled the children to develop at their own pace. For example, a two year old who was advanced in his motor skill development would still be challenged by the activities that were available to him while a four year who was behind in this area would be able to engage in beneficial activities at his level without feeling that he was working at a level behind his peers.

The writer then looked at equipment that was available. In planning a play environment, she determined which pieces of equipment would meet the

needs of the students not only in terms of motor skill development, but also in terms of social, emotional, and cognitive development. The equipment would be simple but attractive to the children and would provide challenge.

Safety was another feature to be considered in the purchase of equipment. The writer felt that state and city requirements were written with safety in mind and followed these guidelines in the selection and installation of equipment. The writer also found that certain pieces of apparatus had a higher accident rate than others and avoided these. Considerations that were looked at included things such as openings that could trap an arm, leg, head, etc., components that could catch the child's clothing, slip resistant surfaces, low steps on climbing equipment, handles small enough to be grasped, easy on and off access, and adult accessibility to tunnels and crawl spaces.

In planning the environment, the writer ensured that the layout provided for a safe flow of traffic between play areas, that moving equipment such as swings were away from traffic areas, that "danger" zones, such as the area in front of slides or swings were marked, and that all areas could be easily monitored by the teachers.

The writer used professional installers to install the equipment. This was done for several reasons. First of all, safety and liability factors had to be considered. Professional installation aided in obtaining insurance coverage and was projected to cut costs in the long run by minimizing future maintenance costs.

While this work was in progress, the writer worked with the assistant director and teachers to emphasize the importance of play activities in the preschool curriculum. Inservice sessions covered the areas of guidelines and procedures for outdoor play, equipment safety, awareness of possible hazards, and the integration of movement experiences into the curriculum.

The general goal of this practicum, to enhance and complement the programs of the school through the development of a play environment and an emphasis on learning through play was met through this solution strategy. The first objective, the devotion of more time to physical play activities each day, was accomplished by the creation of a play environment and by a renewed emphasis on learning through play. The teachers were encouraged to plan physical and motor skill activities to reach the learning objectives of their classes.

The second objective, the enhancement of the play environment by the addition of appropriate equipment, was achieved by planning and designing equipment that enhanced the childrens' motor skill development. The equipment and apparatus provided opportunities for the children to grow and develop physically at their own rate and to achieve other learning objectives through play.

The third objective, to utilize the resources of the school, was met by the writer in terms of allocating the financial resources necessary to complete the play environment. The resources of the curriculum consultant, the assistant director, and the teachers were also used to provide a child-centered, activity centered, effective learning environment for the students.

In addition to the development of the play environment, the writer planned several inservice sessions. The purpose of the sessions was to renew the emphasis on learning through play in the curriculum and to assist the teachers in planning activities that would lead to discovery learning by the students through gross motor skill activities.

Report of Action Taken

The solution to the problem of the lack of availability of gross motor and physical development activities in the curriculum was approached in two ways. First, the writer researched types of outdoor play equipment and determined which pieces of apparatus were safe, developmentally appropriate, and able to specifically address needs of children in the two to five year old age group. The writer considered several general factors in the development of an outdoor play environment. These included the overall design of the playground area, the design, installation, and maintenance of the equipment, and the supervised use of the equipment.

The writer's specific critera for selecting equipment included equipment that would meet specific government safety standards, that was challenging, would encourage various types of play (motor, social, dramatic, cognitive, co-operative, etc.), would offer choices, and would allow children the opportunity to discover new things about themselves, their abilities, and their environment. The equipment selected would enhance the self-esteem of the students and give them a sense of exploration and confidence in their abilities. Both individual and group equipment were purchased so

that children had the opportunity to play either alone or together. Areas for quiet or independent play were designed away from the noisier open group areas so that children wishing to play quietly or in a smaller group were able to do so.

Safety measures considered by the writer included physically defined areas of play, a safe flow of traffic between areas, adequate entrance and exit space for equipment, smooth surfaces on equipment, no small openings on equipment, etc. A list of safety specifications is found in Appendix G. For safety reasons the equipment was professionally installed.

Regular maintenance and the upkeep of equipment was also seen as a safety factor. The writer developed a maintenance checklist (see Appendix H), and safety rules for the students were written in conjunction with the director and the teachers (see Appendix I). Appropriate use of equipment and teacher supervision of the students were perhaps the most important safety features considered.

The writer researched these various aspects of equipment and selected ten pieces for purchase (see Appendix J). The slide selected was constructed of galvanized steel, with a steel center support pole, a safety headrail, side rails, safety sides on the incline

board to insure sit-down sliding, a small platform to accomodate three or four children which would also allow reluctant or timid children to retreat, and was professionally installed. This type of slide allowed for balancing activities, group or individual play, and the development of social and turn-taking behavior.

The swing set selected also was constructed of galvanized steel with welded steel chains, safety belt seats, and self-lubricating swing hangers. Again, for safety reasons, the set was professionally installed. Behaviors encouraged by the swings included weight bearing, weight shifting, and social behaviors such as turn-taking and sharing.

The next pieces of equipment consisted of four spring-type rocking animals situated in front of a climber designed to look like a stagecoach. The rocking animals were made of aluminum and covered with baked epoxy. The option was provided to mount the springs either on a portable base or on a permanent base in the ground. The writer chose to secure the springs into the ground. The climber was made of epoxy covered steel pipe with climbing ladders on both sides and a horizontal ladder across the top. There was a "driver's seat" in the front, another seat in the back, and two seats in the center. Each seat was able to accomodate

two or three children. The "stagecoach" allowed dramatic play and creative role playing to take place. Children developed leadership skills and were given the opportunity to get along in a large group free play situation. Gross motor skills were enhanced by climbing, crawling, swinging, etc.

The next piece of equipment was a 6 foot crawl-through tunnel made of aluminum covered with 20 inch diameter rings. The crawl board could be placed flat or slanted at various angles. The teachers were able to adjust the angle of the slide to the age and/or size of the students. Students could crawl through the tunnel or climb over it. Skills developed were climbing, crawling, role playing, etc.

The preceding lists of equipment were large pieces and designed as permanent, in-ground play apparatus. The writer decided, given the Midwest's five to six months of inclement winter weather, to purchase some portable equipment that could be utilized as either indoor or outdoor play equipment. In this way, gains made in the area of physical delevelopment activities would be carried on and not be curtailed during the winter months. These portable pieces of equipment included a nautilus, a vari-balance board set, a boat slide, a snap city and indoor-outdoor trike stops.

The nautilus was a hard plastic multi-functional structure which included steps, a slide, a crawl through space, and a hiding space. Children had a choice in how they wished to use the nautilus, and two or three children could play at the same time. The hiding space underneath gave one or two children a sense of privacy and quiet, but was still visible to the teacher. The children could use the space as a mountain or cavern or whatever their imaginations dictated. Motor skills developed with the nautilus included body weight, climbing, crawling, dramatic and social skills.

The vari-balance board set consisted of four boards which were set on five bases. The boards were 48 inches long and 4 feet wide, made of lacquer finished wood, and could be set in any direction. The boards provided a great deal of versatility in that they could be arranged in various path patterns to challenge childrens' skills. All students, regardless of their ability, were able to participate in using the vari-balance board. Balance and co-ordination skills were developed and challenged with this piece of equipment.

The boat slide was quite versatile and could be used in many ways to develop various skills. It consisted of an oversized rocking boat made of hard plastic with seating for up to four children. Social

play, dramatic play, body motion, body weight, rocking, spinning, swaying and sliding activities were developed. There was seating for one to four children. The boat slide provided co-ordination of motor movements and co-operative play efforts. When turned over, the boat became a bridge with stairs, a smooth surface, and a tunnel. Here the children were able to practice the motor planning necessary for step negotiation, climbing, sliding, crawling, etc.

The snap city set consisted of various pieces of Snap Land equipment. The snap walls purchased consisted of lightweight durable plastic pieces that could be snapped together to form several types of structures such as houses, stores, forts, boats, trains, cars, etc. The pieces were sturdy enough for children to climb on, to climb through, to sit on, etc. The ease of design allowed the teachers and students to change the city and to build new structures or modify existing structures as they wished. It provided many opportunities for make-believe play acting. When a play theme was exhausted, the group was easily able to create another.

This type of equipment allowed the students to have input into the decision making process and into the creation of their own play environment. Depending upon the current design of the city, any number of motor

skills and types of play were encouraged. The students were constantly challenged and motivated by the ever changing city.

In addition to planning an outdoor play environment, the writer planned inservice sessions for the assistant director and the classroom teachers. The goal of these sessions was to stress the importance of play activities in the preschool curriculum and to place a renewed emphasis on learning and discovery through play. Appendix K lists the topics covered in the inservice sessions.

The first two sessions were introductory sessions in which the writer discussed the pre-implementation survey and the goals of the program. The writer discussed the physical objectives of the pre-school program and encouraged the teachers to share body movement and balance activities that they had used in their classrooms. The writer's outline of these two sessions is found in Appendix L.

The third and fourth sessions focused on cognitive goals and objectives that could be reached through play activities. The writer shared sample lesson plans and illustrated active and passive means of reaching the same objective. The outlines of these two sessions is found in Appendix M.

The next two inservice sessions concerned social goals and objectives. The use of the new equipment and play and discovery planning techniques were discussed as ways of meeting the goals and objectives of the preschool. This outline is in Appendix N.

These sessions were followed by two sessions on the topic of emotional goals and objectives which concerned the attainment of a realistic and positive self-image and a positive relationship with both adults and peers. The teachers were asked to devise activities designed to foster these types of growth. Appendix O contains the outline for this session.

At this point in the implementation period, the teachers were beginning to implement motor skills activities in their lesson planning. The next sessions were devoted to indoor motor skills activities and discussions of activities involving the students (see Appendix P).

These were followed by small group sessions. The two and three year old teachers looked at their age level objectives and their lesson plans in terms of play activities (see Appendix Q). The four and five year old teachers did the same with their objectives (see Appendix R).

The final session was an evaluative one where the

teachers discussed the successes of their play curriculum and completed post-implementation activity time checklists (see Appendix S). The amount of time spent in each classroom on motor skill development activities after the implementation period was compared to the amount of time spent before the implementation period and gains were recorded for each age group (see Appendix T). The teachers also completed a post-implementation motor skills checklist (see Appendix U) and an equipment checklist (see Appendix V).

A post-implementation survey was distributed to the parents of the students enrolled in the school. The results were analyzed (see Appendix W) and compared to the pre-implementation survey (see Appendix X).

CHAPTER V

RESULTS, CONCLUSIONS, RECOMMENDATIONS

Results

Objective one, the devotion of 10% more time each day to play activities, was measured by a play activities checklist. Each teacher indicated the number of minutes devoted daily to gross motor skill development and physical play activities. Each of the five classes exceeded the goal for this objective.

The two year old class and the younger three year olds doubled their physical play activity time. The writer attributed this to an increased understanding of the importance of motor skill development and play activities for young children along with an emphasis on play in the curriculum and in lesson planning.

The older three year old group increased their physical activity time by 50% each day. The four year olds increased their time by 25% and the five year old class increased by 20%. Table 1 summarizes the results of the activity time checklist.

Table 1. Summary of Activity Time Checklists

Age	Pre-Time	Post-Time	Minutes Increased	%
2	75	150	75	+100%
3 (young)	75	150	75	+100%
3 (older)	60	90	30	+50%
4	60	75	15	+25%
5	50	60	10	+20%

The teachers also completed a motor skills checklist. The pre-implementation checklist showed that the students participated in 22 of 70 activities. The post-implementation checklist (see Appendix U) indicated participation in all 70 of the activities. This was made possible by equipment that enhanced participation in these types of activities and the increased amounts of time allocated to physical play activities in the regular class schedules.

The second objective, the enhancement of the play environment by a minimum of 10 pieces of equipment, was measured by an equipment checklist. The writer determined that nine pieces of equipment were available to the students before the implementation period. Twenty-three pieces were avaible after the

implementation. Although only ten pieces of equipment were purchased, most of them were multi-functional and offered more than one type of play. Thus, fourteen new pieces of equipment were checked on the post-implementation checklist (see Appendix V).

The third objective, the utilization of the resources of the school to enhance the programs of the school in the area of play development, was measured by a post-implementation parent survey. The results of the survey (see Appendix W) were compared with those of the pre-implementation survey (see Appendix X). Sixty-five surveys were returned. Questions relating to the importance of motor development activities showed an increase in the number of responses that agreed, or strongly agreed, that such activities were important for preschool students. Questions concerning the role of physical play activities in the social, emotional, and cognitive growth areas also showed an increase in the number of respondents agreeing to the importance of these activities.

Questions concerning the adequacy of the school's play equipment showed a 100% change in response. The pre-implementation survey results indicated that all of the respondents disagreed that the equipment was adequate, and agreed that more equipment should be

provided. The respondents of the post-implementation survey all agreed that the equipment now was adequate.

The pre-implementation survey showed that the majority of the parents felt that the students should spend more time in play activities. The post-implementation survey indicated that the majority of parents felt that the needs of the students were being met through the increased emphasis on play activities. All of the respondents agreed that the programs of the preschool had been enhanced by the development of an outdoor play environment.

Table 2 summarizes the results of the parent survey.

Table 2. Parent Survey Results

Survey Item	# of Agree/Strongly Agree Pre / Post	+ / -
1. Motor development activities are important for preschool children.	59 / 61	+2
2. Children learn through play. Play is		

the preschool child's work.	58 / 59	+1
9. The current play equipment is adequate.	0 / 65	+65
10.The students should spend more time in play activities.	62 / 34	-28
11.More play equipment should be provided.	68 / 2	-66
15.The programs of the school would be / have been enhanced by the development of an expanded play environment.	66 / 65	--

Conclusions

The writer, teachers and parents felt that the programs of the pre-school were enhanced through the development of the physical play environment. This area of learning complemented the existing programs of the school and enriched the experiences of the students in all areas of learning.

The writer found that the practicum correlated with the views expressed by many authors found in the literature review. Stone and Remko (1981) wrote that extending the learning environment to the outdoors would

strengthen the indoor learning program and that all areas of the curriculum would be enhanced with the addition of an outdoor learning environment. Children would have greater opportunities to participate in the learning process. Well planned playground activities stimulate the children to observe, describe, classify, give descriptions, solve problems, understand relationships, reason and infer. Children also have the opportunity to apply and extend the skills they have learned in other subject areas such as language, science, mathematics, social studies, etc. Fowler (1980) wrote that the preschool years are years of learning to get along, to share, to take turns and to work together. Pre-school children are exploring and learning about themselves and their world. Teachers can play a major role in discovery learning by structuring the environment so that materials, equipment and apparatus which are designed to help children learn are available.

The writer felt that it was important for those responsible for the daily curriculum to understand the value of play in the developmental process. Parnell and Ketterson (1980) wrote that the playground was a major vehicle for childrens' learning and development. Children play because they need the stimulation offered

by a variety of playground materials. It is through play that children develop their own physical abilities along with an understanding of their physical surroundings and their role in social groups.

The inservice sessions planned by the writer were designed to assist the teachers to meet the needs of the students in the areas of motor skill development and physical play activities. Teacher training and planned playground activities were as important to the program as the availability of equipment in the daily curriculum. It was vital that teachers and play leaders understoond the potential of play in child development, and knew how to observe, when to intervene, to instruct, and to determine which was needed (Frost and Wortham, 1988).

Lovell and Harms (1985) wrote that outdoor play, when planned as an integral component of the total learning environment, could contribute to the childrens' cognitive development, communicative and social skills, and give children a sense of independence and a positive self image.

One topic of the inservice sessions was the Piagetian approach to early childhood education. Moncada (1984) studied the Piagetian approach and concluded that early childhood education must follow

Piaget's principles in order to produce citizens with the abilities and qualities demanded of today's world.

Moss and Black (1984) wrote that a successful teacher would derive most of the day-to-day curricular content from the students. In this way, the teacher focuses on the child's individual needs and, in doing so, motivates learning.

The writer considered many things when researching and selecting playground equipment. These included safety and maintenance aspects, installation, insurance concerns, developmental appropriateness, and levels of interest, variety and challenge for the children. Many authors have written about these types of issues.

Anthony (1987) wrote of safety and liability concerns. Industry experts felt that safty was compromised when untrained workers were involved in the construction or installation of playground equipment. It is almost imperative to insure that substandard building materials are not used, and that an architect or contractor familiar with playground equipment design oversees the entire project.

Parnell and Ketterson (1980) wrote that contemporary playgrounds needed equipment and materials that were flexible and that could be changed to accomodate childrens' growth and interest patterns.

Equipment that had some built in options allowed the students to have some control over the environment. An array of unstructured materials and time to use them was also recommended.

Wardle (1987) wrote that all equipment should be cemented two feet into the ground, and that the ground be covered with a soft, absorbent material for safety. Equipment should be spaced to avoid congestion. There should be no physical barriers or areas designed for use of only children of a specific age. She felt that teachers should know their childrens' abilities and allow them to use only appropriate equipment and to use the equipment in a safe and correct way.

The city in which the preschool is located has approximately six months of cold, rainy, snowy winter weather. The writer wanted to insure the continuity of the physical development program and to allow the children to enjoy maximum learning benefits throughout the entire year. In order to do this, she researched and selected several pieces of portable equipment that could be used either outdoors or inside the building.

Clarkson and Zwolak (1987) wrote that indoor playgrounds must be integrated into the curriculum along with outdoor play environments. For budgeting and space considerations, they suggested pieces of equipment that

would work differently for each age group by accomodating various skills, developmental needs and interests.

The parents, teachers and students were pleased with the results of the play environment and the emphasis on learning through play in the curriculum. The parents reported that the children were very enthusiastic, and regularly talked about things that happened on the playground or about their playground activities. The teachers also saw increased motivation among the students, and felt that they were learning more and enjoying it more. The writer noticed a new enthusiasm among the teachers, who seemed to have found a new interest in planning and working with the students.

In conclusion, the writer found that the programs of the preschool were greatly complemented by the addition of the play environment. She found that emphasizing developmentally appropriate activities led to increased enthusiasm, motivation and learning. She felt confident that the utilization of resources in this area had positive results that would help to achieve the general goals and objectives of the preschool.

Recommendations

The writer had three recommendations in this area. She would recommend the provision of developmentally appropriate equipment to all schools serving children of any age. While researching this area, she became very aware of the changes that have taken place in the past few years in playground development, and of the many options that were available. She concluded that a good playground with selected pieces of equipment would be an invaluable asset to all the programs of a school.

Her second recommendation covered the area of teacher inservice programs. The minimal requirements for preschool teachers do not always insure knowledge of sound child development theories and practices. Schools which provide training in this area are committed to a higher quality of education for their students.

Finally, the writer recommends an emphasis on planning. Her own findings, supported by the literature, conclude that teachers who plan for specific discovery learning activities were much more successful in meeting their objectives than those who did not.

Dissemination

The results of the practicum were disseminated in several ways. First, the results were made available to the teachers and parents of the preschool and to interested community members.

The writer knows other preschool owners in the area, and is also a member of a metropolitan owners' association. She often participates in seminars, workshops, etc., relating to the child care industry. These are often sessions at which ideas, products, and information are shared. She has already shared the practicum results with co-workers, and plans to continue doing so.

Finally, the writer has participated in early childhood conferences, and now plans to speak using her practicum as the basis of her presentation. She feels that this topic is of interest to early childhood educators and that the positive results of the practicum provide a good starting point for others wishing to incorporate a similiar aspect of learning into their schools.

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APPENDIX A

GROSS MOTOR SKILL DEVELOPMENT ACTIVITIES

APPENDIX A

GROSS MOTOR SKILL DEVELOPMENT ACTIVITIES

LOCOMOTION ACTIVITIES

Running
- Relaxed run
- Speed run
- Galloping
- Chasing
- Fleeing
- Dodging

Walking

Hopping

Marching

Skipping

Dancing

Tricyling

Sliding

Ball Activities
- Bouncing
- Catching
- Throwing
- Striking
- Kicking
- Chasing
- Rolling

Scrambling

Jumping

Swinging

Balancing

Hanging

Tumbling

NON-LOCOMOTION

Move body parts while on equipment and staying in place

Curl

Stretch

WEIGHT BEARING

Supporting weight on or by various body parts

Supporting weight on or by combination of body parts

Arriving / leaving equipment safely

Balancing on various body parts

Hanging by various body parts

Swinging from various body parts

BODY SHAPES

Making various shapes with body

WEIGHT TRANSFER

From one body part to another

Rolling with various body shapes

Rolling in different

directions on
equipment
Rocking on various
body parts

RANGE OF MOTION	BODY ACTION
Reaching	Stretching
Large movements	Curling
Small movements	Twisting
Co-ordinated movements	Turning on/over/ around/under/along

MOTOR SKI

APPENDIX B

ILL CHECKLIST RESULTS

APPENDIX B

MOTOR SKILL CHECKLIST RESULTS

GROSS MOTOR SKILL DEVELOPMENT ACTIVITIES

Check (*) the activities in which your students participate on a regular basis.

LOCOMOTION ACTIVITIES

* Running	* Ball Activities
* Relaxed run	* Bouncing
* Speed run	* Catching
* Galloping	* Throwing
* Chasing	* Striking
* Fleeing	* Kicking
* Dodging	* Chasing
* Walking	* Rolling
* Hopping	* Scrambling
* Marching	Jumping
* Skipping	Swinging
* Dancing	Balancing
* Tricyling	Hanging
Sliding	Tumbling

NON-LOCOMOTION

Move body parts while on equipment and staying in place

Curl

Stretch

WEIGHT BEARING

Supporting weight on or by various body parts

Supporting weight on or by combination of body parts

Arriving / leaving equipment safely

Balancing on various body parts

Hanging by various body parts

Swinging from various body parts

BODY SHAPES

Making various shapes with body

WEIGHT TRANSFER

From one body part to another

Rolling with various body shapes

Rolling in different

directions on equipment

Rocking on various body parts

RANGE OF MOTION	BODY ACTION
Reaching	Stretching
Large movements	Curling
Small movements	Twisting
Co-ordinated movements	Turning on/over/ around/under/ along

APPENDIX C

ACTIVITY TIME CHECKLIST

APPENDIX C

ACTIVITY TIME CHECKLIST

Indicate the number of minutes devoted to motor skill development and physical play activities each day.

75 minutes	2 year olds
75 minutes	3 year olds (younger group)
60 minutes	3 year olds (older group)
60 minutes	4 year olds
50 minutes	5 year olds

APPENDIX D

EQUIPMENT CHECKLIST

APPENDIX D

EQUIPMENT CHECKLIST

Check (*) the equipment and apparatus that are available to the students at this time.

Super Structures with many motor options	* Sand Box
	* Water Table
	* Wheel Vehicles
Climbers	* Balance Beam
Swings	Inclined Boards
Slides	Rockers
Clatter Bridges	Punching Bag
Sliding Poles	* Balls
Tunnel	* Bats
Rope Climb	* Rackets
Tires. Inner Tubes	* Jump Ropes
Ladders	* Blocks
Merry-go-round	Hoops
Mini-gym	Scrambler
Play gym	Bouncer
Climbing House	Crawl-through
Net Climber	Varl-balance Board

APPENDIX E

PARENT SURVEY

APPENDIX E

PARENT SURVEY

Directions: Please circle your response to the following statements.

1 = strongly agree

2 = agree

3 = undecided

4 = disagree

5 = strongly disagree

1)	1	2	3	4	5	Motor development activities are important for preschool children.
2)	1	2	3	4	5	Children learn through play. Play is the preschool child's work.
3)	1	2	3	4	5	Physical play activities lead to social development in preschool children.

4)	1	2	3	4	5	Physical play activities lead to emotional development in preschool children.
5)	1	2	3	4	5	Physical play activities lead to cognitive growth in preschool children.
6)	1	2	3	4	5	My child attends school eight or more hours each day.
7)	1	2	3	4	5	My child plays outside after returning home from school.
8)	1	2	3	4	5	This school prepares children for first grade.
9)	1	2	3	4	5	The current play equipment is adequate.
10)	1	2	3	4	5	The students should spend more time in play activities.
11)	1	2	3	4	5	More play equipment should be provided.

12)	1	2	3	4	5	The play area encourages social skills (taking turns, co-operating, sharing).
13)	1	2	3	4	5	The play area encourages emotional skills (when not getting own way or choice of equipment, controlling temper).
14)	1	2	3	4	5	The play area encourages cognitive skills (counting, spatial relationships, comparisons).
15)	1	2	3	4	5	The programs of the school would be enhanced by the development of an expanded play environment.

APPENDIX F

PARENT SURVEY RESULTS

APPENDIX F

PARENT SURVEY RESULTS

QUESTION #	# OF 68 TOTAL RESPONSES				
	1	2	3	4	5
1) Motor development activities are important for preschool children.	38	21	6	3	0
2) Children learn through play. Play is the preschool child's work.	31	27	8	2	0
3) Physical play activities lead to social development in preschool children.	34	26	7	1	0
4) Physical play activities lead to emotional development in preschool children.	34	25	8	1	0
5) Physical play activities lead to cognitive growth in preschool children.	31	22	11	3	1
6) My child attends school eight or more hours each day.	22	39	1	6	0

7) My child plays outside after returning home from school.

0 12 14 38 4

8) This school prepares children for first grade.

23 38 5 2 0

9) The current play equipment is adequate.

0 0 3 29 36

10) The students should spend more time in play activities.

21 41 4 2 0

11) More play equipment should be provided.

53 15 0 0 0

12) The play area encourages social skills (taking turns, co-operating, sharing).

0 27 23 16 2

13) The play area encourages emotional skills (when not getting own way or choice of equipment, controlling temper).

0 28 25 14 1

14) The play area encourages cognitive skills (counting, spatial relationships, comparisons).

0 27 21 18 2

15) The programs of the school would be enhanced by the development of an expanded play environment.

41	25	2	0	0

APPENDIX G

EQUIPMENT SAFETY SPECIFICATIONS

APPENDIX G

EQUIPMENT SAFETY SPECIFICATIONS

1. Separation of equipment
   -- physically defined areas of play
   -- separate quiet and noisy play areas
   -- separate areas for running, tricycling, etc.
2. Safe flow of traffic between areas
3. Adequate entrance and exit space for apparatus
4. Smooth equipment surface
5. No small openings in equipment
6. Handles, rails, sides, etc. easy to grasp
7. Bars/steps close enough so child can reach rungs
8. Slip-resistant steps, surfaces, etc.
9. Soft playground surface
10. Crawl spaces/tunnels have adequate openings to permit access by adults if necessary
    -- crawl spaces/tunnels visible to adults
11. Developmentally appropriate for size and ability
12. Must meet government safety standards
13. Availability of replacement parts

APPENDIX H

MAINTENANCE CHECKLIST

APPENDIX H

MAINTENANCE CHECKLIST

Each item on the checklist must be inspected on a regular basis. Report any problems immediately. Do not allow children to play on broken or damaged equipment.

1. Vandalism
2. Surface wood chips worn or scattered
3. Chipped or peeling paint
4. Cracks, warping, rusting, breaking
5. Sharp or exposed edges
6. Missing or damaged parts
7. Broken or missing rails, steps, seats, etc.
8. Broken supports or anchors
9. Loose nuts or bolts
10. Lubrication of moving parts

APPENDIX I

SAFETY RULES

APPENDIX I

SAFETY RULES

1. Safety guidelines must be followed
2. Students must be under constant supervision
3. There must be a sufficient number of teachers supervising the students at all times
4. Children must be visible to teachers at all times
5. Teachers must focus their attention on and interact with children to enhance learning and maintain safety
6. First aid procedures must be followed if necessary
7. Equipment must be used properly
8. Maximum number of children on equipment cannot be exceeded
9. Children must not be allowed to use damaged or broken equipment
10. No fighting, throwing, pushing, etc. is allowed on the playground
11. No inappropriate language is allowed on the playground
12. Sharing and taking turns must be encouraged

APPENDIX J

NEW EQUIPMENT INVENTORY

APPENDIX J

NEW EQUIPMENT INVENTORY

Permanent Outdoor Equipment

1. Slide
2. Swing set
3. Rocking animals
4. Climber
5. Six foot tunnel

Portable Indoor-Outdoor Equipment

1. Nautilus
2. Vari-balance board
3. Boat slide
4. Snap city
5. Trike stops

APPENDIX K

TEACHER INSERVICE TOPICS

APPENDIX K

TEACHER INSERVICE TOPICS

1. Physical objectives
   -- body movement
   -- body control
   -- large and small muscle movement
   -- directionality
   -- spatial relationships

2. Cognitive goals and objectives
   -- learning objectives that can be reached through play activities

3. Social goals and objectives
   -- social objectives that can be reached through play activities

4. Emotional goals and objectives
   -- self-image and relationship goals that can be reached through play activities

5. Indoor motor skill activities

6. Age level objectives in terms of physical play activities

7. Review and discussion

8. Evaluation

APPENDIX L

INSERVICE OUTLINE SESSIONS 1 & 2

APPENDIX L

INSERVICE OUTLINE SESSIONS 1 & 2

Physical Objectives

1. Locomotion activities
   -- Walking, running, hopping, skippping
   -- Walking up and down stairs
   -- Jumping, scrambling, swinging, hanging, tumbling, balancing

2. Non-locomtion activities
   -- Moving body parts while staying in place

3. Body shapes Activities
   -- Making various shapes with body

4. Weight bearing activities
   -- Supporting weight on various body parts

5. Weight transfer activities
   -- Transfer from one body part to another

6. Range of motion activities
   -- Large / small movements
   -- Co-ordination of movement

7. Body action activities
   -- Stretching, curling, twisting
   -- Turning on, over, around, under, along

8. Theories of child development
   -- Piaget
   -- Relationship of play to cognitive learning

9. Physical activities in the preschool curriculum

10. Physical play activities and lesson planning

APPENDIX M

INSERVICE OUTLINE SESSIONS 3 & 4

APPENDIX M

INSERVICE OUTLINE SESSIONS 3 & 4

Cognitive Development Goals and Objectives

1. Concepts enhanced by outdoor play area
   -- Names of objects, properties, etc.
   -- Relationships such as in/out, up/down, over/under, high/medium/low, etc.

2. Knowledge about natural world
   -- Changes in weather
   -- Relationships between distance and space
   -- Knowledge of their own bodies and abilities

3. Expanded language experiences and ability

4. Understanding cause/effect relationships
   -- Relate present planning to future events

5. Development of perceptual-motor skills

6. Development of problem solving skills
   -- Thinking about situations and solutions before solving problem

7. Integration of various subject matters

8. Learning to plan activities

9. Learning to express ideas to others

10. Practicing in order to achieve

11. Development of visual/auditory skills

12. Using play experiences and skills to enjoy books

APPENDIX N

INSERVICE OUTLINE SESSIONS 5 & 6

APPENDIX N

INSERVICE OUTLINE SESSIONS 5 & 6

Social Development Goals and Objectives

1. Degrees of social involvement and awareness

2. Categories of play
   -- Unoccupied behavior
   -- Onlooker behavior
   -- Solitary independent play
   -- Parallel play
   -- Associative play
   -- Co-operative play

3. Social behaviors
   -- Interact. lead. follow. role play

4. Contributions to group activities

5. Refinement of social skills
   -- Take turn. co-operate. share. plan together

6. Growth in understanding of social world
   -- Recreate adult roles in dramatic play

7. Co-operative play equipment

8. Problem solving in the social arena

9. Development of friendships

10. Ability to communicate with others

11. Ability to understand others' feelings and point of view

12. Lesson planning to facilitate the development of social skills through physical play

APPENDIX O

INSERVICE OUTLINE LESSONS 7 & 8

APPENDIX O

INSERVICE OUTLINE LESSONS 7 & 8

Emotional Development Goals and Objectives

1. Developing self-confidence in students
   -- Body image
   -- Self-concept
   -- Success oriented

2. Developing sense of competence in students
   -- Locomotion skills
   -- Manipulation skills
   -- Body weight/weight transfer activities
   -- Stability skills

3. Positive energy release

4. Ability to use leisure time
   -- Able to plan free time

5. Ability to function in variety of situations

6. Ability to make effective decisions
   -- Assume responsibility for planning
   -- Accepts suggestions
   -- Participates in classroom decisions

7. Development of sense of belonging

8. Ability to lose without becoming discouraged

9. Knows what to do when teased

10. Development of leadership skills

11. Lesson planning to facilitate the development of emotional skills through physical play activities

APPENDIX P

INSERVICE OUTLINE SESSIONS 9 & 10

APPENDIX P

INSERVICE OUTLINE SESSIONS 9 & 10

Indoor Motor Skill Activities

1. Review of child development principles

2. Review of importance of motor skill development and physical play activities

3. Review progress made in planning learning objectives through motor activities and discovery

4. Portable pieces of equipment that will be available indoors during winter months
   -- nautilus
   -- vari-balance board set
   -- boat slide
   -- snap city
   -- trike stops

5. Incorporation of equipment into the curriculum and lesson planning

APPENDIX Q

INSERVICE OUTLINE SESSION 11

APPENDIX Q

INSERVICE OUTLINE SESSION 11

Inservice Session 2 & 3 Year Old Teachers

1. Review of goals for 2 and 3 year old students
   -- cognitive
   -- social
   -- emotional
   -- language development
2. Review of Piaget's stages of development
3. Critique lesson plans
4. Implementation of lesson plans
5. Discussion

APPENDIX R

INSERVICE OUTLINE SESSION 12

APPENDIX R

INSERVICE OUTLINE SESSION 12

Inservice Session for 4 & 5 Year Old Teachers

1. Review of goals for 4 and 5 year old students
   -- cognitive
   -- social
   -- emotional
   -- language development
   -- reading/math readiness programs
   -- readiness for 1st grade programs (5 year olds)

2. Review of Piaget's stages of development

3. Critique lesson plans

4. Implementation of lesson plans

5. Discussion

APPENDIX S

POST IMPLEMENTATION ACTIVITY TIME CHECKLIST

APPENDIX S

POST IMPLEMENTATION ACTIVITY TIME CHECKLIST

Indicate the number of minutes devoted to motor skill development and physical play activities each day.

150 minutes	2 year olds
150 minutes	3 year olds (younger group)
90 minutes	3 year olds (older group)
75 minutes	4 year olds
60 minutes	5 year olds

APPENDIX T

ACTIVITY TIME COMPARISON

APPENDIX T

ACTIVITY TIME COMPARISON

Indicate the number of minutes devoted to motor skill development and physical play activities each day. Give the pre-implementation and post-implementation times.

Age	Pre	Post	+/-	%
2	75	150	+75	+100%
3 (young)	75	150	+75	+100%
3 (older)	60	90	+30	+50%
4	60	75	+15	+25%
5	50	60	+10	+20%

APPENDIX U

POST IMPLEMENTATION MOTOR SKILL CHECKLIST RESULTS

APPENDIX U

POST IMPLEMENTATION MOTOR SKILL CHECKLIST RESULTS

GROSS MOTOR SKILL DEVELOPMENT ACTIVITIES

Check (*) the activities in which your students participate on a regular basis.

LOCOMOTION ACTIVITIES

* Running	* Ball Activities
* Relaxed run	* Bouncing
* Speed run	* Catching
* Galloping	* Throwing
* Chasing	* Striking
* Fleeing	* Kicking
* Dodging	* Chasing
* Walking	* Rolling
* Hopping	* Scrambling
* Marching	* Jumping
* Skipping	* Swinging
* Dancing	* Balancing
* Tricyling	* Hanging
Sliding	* Tumbling

NON-LOCOMOTION

* Move body parts while on equipment and staying in place
* Curl
* Stretch

WEIGHT BEARING

* Supporting weight on or by various body parts
* Supporting weight on or by combination of body parts
* Arriving / leaving equipment safely
* Balancing on various body parts
* Hanging by various body parts
* Swinging from various body parts

BODY SHAPES

* Making various shapes with body

WEIGHT TRANSFER

* From one body part to another
* Rolling with various body shapes
* Rolling in different

directions on equipment

* Rocking on various body parts

RANGE OF MOTION	BODY ACTION
* Reaching	* Stretching
* Large movements	* Curling
* Small movements	* Twisting
* Co-ordinated movements	* Turning on/over/ around/under/ along

APPENDIX V

POST IMPLEMENTATION EQUIPMENT CHECKLIST

APPENDIX V

POST IMPLEMENTATION EQUIPMENT CHECKLIST

Check (*) the equipment and apparatus that are available to the students at this time.

* Super Structures with many motor options	* Sand Box
	* Water Table
	* Wheel Vehicles
* Climbers	* Balance Beam
* Swings	* Inclined Boards
* Slides	* Rockers
Clatter Bridges	Punching Bag
Sliding Poles	* Balls
* Tunnel	* Bats
Rope Climb	* Rackets
Tires, Inner Tubes	* Jump Ropes
* Ladders	* Blocks
Merry-go-round	* Hoops
* Mini-gym	Scrambler
* Play gym	Bouncer
* Climbing House	* Crawl-through
Net Climber	* Vari-balance Board

APPENDIX W

POST IMPLEMENTATION PARENT SURVEY RESULTS

APPENDIX W

POST IMPLEMENTATION PARENT SURVEY RESULTS

QUESTION #	# OF 65 TOTAL RESPONSES				
	1	2	3	4	5
1) Motor development activities are important for preschool children.	43	18	2	2	0
2) Children learn through play. Play is the preschool child's work.	38	21	4	2	0
3) Physical play activities lead to social development in preschool children.	41	21	3	0	0
4) Physical play activities lead to emotional development in preschool children.	40	22	3	0	0
5) Physical play activities lead to cognitive growth in preschool children.	35	23	6	1	1
6) My child attends school eight or more hours each day.	18	38	2	5	0

7) My child plays outside after returning home from school.

0	13	11	39	2

8) This school prepares children for first grade.

24	35	3	1	0

9) The current play equipment is adequate.

27	38	0	0	0

10) The students should spend more time in play activities.

8	26	2	16	13

11) More play equipment should be provided.

0	2	0	45	12

12) The play area encourages social skills (taking turns, co-operating, sharing).

45	16	2	2	0

13) The play area encourages emotional skills (when not getting own way or choice of equipment, controlling temper).

46	15	4	0	0

14) The play area encourages cognitive skills (counting, spatial relationships, comparisons).

31	23	6	5	0

15) The programs of the school have been enhanced by the development of an expanded play environment.

51	14	0	0	0

APPENDIX X

COMPARISON OF PARENT SURVEY RESULTS

APPENDIX X

COMPARISON OF PARENT SURVEY RESULTS

QUESTION #	# OF CHANGE OF RESPONSES			
1	2	3	4	5
1) Motor development activities are important for preschool children.				
+5	-3	-4	-1	0
2) Children learn through play. Play is the preschool child's work.				
+7	-6	-4	0	0
3) Physical play activities lead to social development in preschool children.				
+7	-5	-4	-1	0
4) Physical play activities lead to emotional development in preschool children.				
+7	-3	-5	-1	0
5) Physical play activities lead to cognitive growth in preschool children.				
+4	+1	-5	-2	0
6) My child attends school eight or more hours each day.				
-4	-1	+1	-1	0

7) My child plays outside after returning home from school.

0 +1 -3 +1 -2

8) This school prepares children for first grade.

+1 -3 -2 -1 0

9) The current play equipment is adequate.

+27 +38 -3 -29 -36

10) The students should spend more time in play activities.

-13 -15 -2 +14 +13

11) More play equipment should be provided.

-53 -13 +6 +45 +12

12) The play area encourages social skills (taking turns, co-operating, sharing).

+45 -11 -21 -14 -2

13) The play area encourages emotional skills (when not getting own way or choice of equipment, controlling temper).

+46 -23 -21 0 0

14) The play area encourages cognitive skills (counting, spatial relationships, comparisons).

+31 -4 -15 -13 0

15) The programs of the school have been enhanced by the development of an expanded play environment.

+51 +14 0 0 0